



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D135-1027-241
Job Sheet 190570



Part No: D135-1027-241

Job Qty: 1 pcs

Part Name: STD HEIGHT AFT Crosstube Assembly



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 2/11/19

Job Tracking No:

Due Date: 3/29/19

Created By: Jesse White

Type: Stock

Description: SIOP

Note: D135-1027-241 REV.B IPP REV:A 17.09.08 NEW ISSUE DD VERF:DP IPP REV:B 18.11.08 AS PER DWG
REV.B DD VERF:JFS

Ship Via:

*Chg 001 188
attachment*

Bill of Materials

Route updated

DAS
35
9-89

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Crosstubes - 1	1 pcs	3/29/19		0.00	0.25	Crosstubes - 1		
							Crosstubes - 2		
							Crosstubes - 3		
							Crosstubes - 4		- AS 19-7-23
110	QC 7	1 pcs	3/29/19		0.00	0.00	QC 7 - 10		
							QC 7 - 13		
							QC 7 - 14		
							QC 7 - 15		
							QC 7 - 17		
							QC 7 - 18		
							QC 7 - 19		
							QC 7 - 2		
							QC 7 - 28		
							QC 7 - 3		
							QC 7 - 30		
							QC 7 - 34		
							QC 7 - 36		
							QC 7 - 37		
							QC 7 - 41		- AS 19-7-27
							QC 7 - 47		
							QC 7 - 48		
							QC 7 - 51		
							QC 7 - 58		
							QC 7 - 59		
							QC 7 - 6		
							QC 7 - 60		
							QC 7 - 9		
							QC 7 - 68		
							QC 7 - 50		
							QC 7 - 67		

Plex 2/11/19 1:01 PM dart.white.jesse



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Container No: S199731



Part: D135-1027-241

Job No: 190570

Serial No/Batch: S199731

Revision: B

Inspector:

Exp Date:

Instructions: TC STC SH18-49 Issue 1, FAA STC SR04276NY dated 18/11/21, E

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

120 Handfinish - 4-1-Assembly-B4B	1 pcs	3/29/19	0.00 0.25	Handfinish - 4 - 1 - B4B	
				Handfinish - 4 - 10 - B4B	
				Handfinish - 4 - 11 - B4B	
				Handfinish - 4 - 12 - B4B	. AB 19-7-28
				Handfinish - 4 - 13 - B4B	
				Handfinish - 4 - 14 - B4B	
				Handfinish - 4 - 15 - B4B	
				Handfinish - 4 - 2 - B4B	
				Handfinish - 4 - 3 - B4B	
				Handfinish - 4 - 4 - B4B	
				Handfinish - 4 - 5 - B4B	
				Handfinish - 4 - 6 - B4B	
				Handfinish - 4 - 7 - B4B	
				Handfinish - 4 - 8 - B4B	
				Handfinish - 4 - 9 - B4B	
140 Spray Paint - 2 - B4B	1 pcs	3/29/19	0.00 1.00	Spray Paint - 1 - B4B	. AB 19-8-1
				Spray Paint - 2 - B4B	
				Spray Paint - 3 - B4B	
				Spray Paint - 4 - B4B	
150 QC 14	1 pcs	3/29/19	0.00 0.00	QC 14 - 15	
				QC 14 - 2	
				QC 14 - 34	
				QC 14 - 41	DAS
				QC 14 - 51	19
				QC 14 - 58	9-0
				QC 14 - 59	
				QC 14 - 9	
154 Handfinish - 4-2-Assembly-B4B	1 pcs	3/29/19	0.00 0.67	Handfinish - 4 - 1 - B4B	
				Handfinish - 4 - 10 - B4B	
				Handfinish - 4 - 11 - B4B	
				Handfinish - 4 - 12 - B4B	
				Handfinish - 4 - 13 - B4B	
				Handfinish - 4 - 14 - B4B	
				Handfinish - 4 - 15 - B4B	
				Handfinish - 4 - 2 - B4B	
				Handfinish - 4 - 3 - B4B	
				Handfinish - 4 - 4 - B4B	
				Handfinish - 4 - 5 - B4B	
				Handfinish - 4 - 6 - B4B	. RD 19-8-6
				Handfinish - 4 - 7 - B4B	
				Handfinish - 4 - 8 - B4B	
				Handfinish - 4 - 9 - B4B	
160 QC 5	1 pcs	3/29/19	0.00 0.00	QC 5 - 10	
				QC 5 - 12	
				QC 5 - 17	
				QC 5 - 18	
				QC 5 - 19	
				QC 5 - 22	
					Plex 2/11/19 1:01 PM dart.white.jesse

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

				QC 5 - 24	
				QC 5 - 3	
				QC 5 - 42	
				QC 5 - 43	
				QC 5 - 49	
				QC 5 - 51	
				QC 5 - 58	
				QC 5 - 68	
				QC 5 - 9	AUG 12 2019 DAS 40
				QC 5 - 50	9-89
				QC 5 - 30	
170	Packaging 3-1 - Stock - B4B	1 pcs	3/29/19	0.00 0.00	Packaging 3 - 1 - B4B
					Packaging 3 - 2 - B4B
					Packaging 3 - 3 - B4B
					Packaging 3 - 4 - B4B
					Packaging 3 - 5 - B4B
					Packaging 3 - 6 - B4B
					Packaging 3 - 7 - B4B
					Packaging 3 - 8 - B4B
					Packaging 3 - 9 - B4B
					Packaging 3 - 10 - B4B
					Packaging 3 - 11 - B4B
					Packaging 3 - 12 - B4B
					Packaging 3 - 13 - B4B
					Packaging 3 - 14 - B4B
					Packaging 3 - 15 - B4B
					Packaging 3 - 16 - B4B
					Packaging 3 - 17 - B4B
					Packaging 3 - 18 - B4B
					Packaging 3 - 19 - B4B
					Packaging 3 - 20 - B4B
					Packaging 3 - 21 - B4B
					Packaging 3 - 22 - B4B
					Packaging 3 - 23 - B4B
					Packaging 3 - 24 - B4B
					Packaging 3 - 25 - B4B
					Packaging 3 - 26 - B4B
					Packaging 3 - 27 - B4B
					Packaging 3 - 28 - B4B
					Packaging 3 - 29 - B4B
					Packaging 3 - 30 - B4B
					Packaging 3 - 31 - B4B
					Packaging 3 - 32 - B4B
					Packaging 3 - 33 - B4B
					Packaging 3 - 34 - B4B
					Packaging 3 - 35 - B4B
					Packaging 3 - 36 - B4B
180	QC 21 - SA	1 pcs	3/29/19	0.00 0.00	QC 21 - SA - 21
					QC 21 - SA - 70
					QC 21 - SA - 53

Part Op 100 - (Chemical Conversion Coat per QSI005 4.1) ***PRIOR TO CHEMICAL CONVERSION*** SCRIBE DART P/N AND
 Descriptions: B/N ON INSIDE OF CUFF PER QSI 044 6.4

110 - (QC7-Inspect Chemical Conversion Coat)

120 - HandFinish4 (Assemble as per dwg) INSTALL THREADED ROD AS PER DWG AND APPLY LOCKTITE 263
 (NOTE 9) AND SEAL BETWEEN THE NUT AND CROSSTUBE USING SEALANT(NOTE10)

140 - Spray Paint (Spray Paint / NDT Room) ***MASK PRIOR TO PRIME AND PAINT AS PER NOTE11, BOTH ENDS***

1- PRIME INSIDE AND OUTSIDE PER QSI005 4.2.1.3.3 (FLOAT SKIDTUBE PRIMER) BATCH: 5189557

2- PAINT OUTSIDE SURFACE AS PER QSI005 4.2.2.4 (FLOAT SKIDTUBE PAINT) BATCH: 5192331 3-

COAT INSIDE SURFACE WITH LPS PROCYON AS PER DWG, QSI005 4.8 4- AFTER FINISH APPLY A 1 INCH
 CENTER LINE ON TOP OF CROSSTUBE WITHIN 0.1" OF CENTERLINE QSI 044 6.1(SEE NOTE 12 AND 13)

150 - (QC14- Inspect Spray Paint)

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐		DEPARTMENT/PROCESS Skid-tube ☐ Cross tube ☐ Eng. (Non-AW) ☐ Engineering ☐ Machining ☐ Small Fab ☐ Prod. Eng. Coord. ☐ Water Jet ☐ Large Fab ☐ Finishing ☐ Rec/Store/Packaging ☐ Supplier ☐ Quality ☐																															
Date : _____		Sequence #: _____		QTY Affected : _____		MRB (QSI042)																													
Description Work Order Deviation				Disposition																															
				Completed By																															
				Lead hand / Supervisor																															
				QC / QA Coordinator																															
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY <table border="0"><tr><td>☐ Pressure/Forced</td><td>☐ Contamination</td><td>☐ Power Loss/Surge</td><td>☐ Positioned Wrong</td></tr><tr><td>☐ Bending</td><td>☐ Misaligned/off center</td><td>☐ Folio/Program</td><td>☐ Outside Tolerance</td></tr><tr><td>☐ Crushing</td><td>☐ BOM/Route</td><td>☐ Grain Direction</td><td>☐ Drawing</td></tr><tr><td>☐ Cracks</td><td>☐ Broken/Damage/Defect</td><td>☐ Weld</td><td>☐ Finish</td></tr><tr><td>☐ Crimp/Kink/Ripple/Wave/Twist</td><td>☐ Incomplete/Unclear Instructions</td><td>☐ Wrong Stock Pulled</td><td>☐ Part Lost/Missing</td></tr><tr><td>☐ Marks/Chatter</td><td>☐ Drill Holes</td><td>☐ Out of Sequence</td><td>☐ Misread</td></tr><tr><td>☐ Mislabeled</td><td>☐ Fit/Function</td><td>☐ Off-set/Set-up</td><td></td></tr></table>						☐ Pressure/Forced	☐ Contamination	☐ Power Loss/Surge	☐ Positioned Wrong	☐ Bending	☐ Misaligned/off center	☐ Folio/Program	☐ Outside Tolerance	☐ Crushing	☐ BOM/Route	☐ Grain Direction	☐ Drawing	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Finish	☐ Crimp/Kink/Ripple/Wave/Twist	☐ Incomplete/Unclear Instructions	☐ Wrong Stock Pulled	☐ Part Lost/Missing	☐ Marks/Chatter	☐ Drill Holes	☐ Out of Sequence	☐ Misread	☐ Mislabeled	☐ Fit/Function	☐ Off-set/Set-up	
☐ Pressure/Forced	☐ Contamination	☐ Power Loss/Surge	☐ Positioned Wrong																																
☐ Bending	☐ Misaligned/off center	☐ Folio/Program	☐ Outside Tolerance																																
☐ Crushing	☐ BOM/Route	☐ Grain Direction	☐ Drawing																																
☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Finish																																
☐ Crimp/Kink/Ripple/Wave/Twist	☐ Incomplete/Unclear Instructions	☐ Wrong Stock Pulled	☐ Part Lost/Missing																																
☐ Marks/Chatter	☐ Drill Holes	☐ Out of Sequence	☐ Misread																																
☐ Mislabeled	☐ Fit/Function	☐ Off-set/Set-up																																	
		Other/Details:																																	

154 - ***CROSSTUBE*** ASSEMBLE AS PER DWG NOTE 13. USE SOAP AND WATER IF NECESSARY AS PER DWG NOTE 14. TORQUE BOLT TO 50-70 IN-LBS AS PER NOTE 13.

160 - (QC5- Inspect part completeness to step on W/O)

170 - (Identify as per dwg & Stock Location: _____)

180 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D135-1027-251	Std Height Aft Crosstube	1 Ea (1 ea)	100-Crosstubes - 1	5164524
D5511-1	Threaded Rod	3 pcs (3 ea)	100-Crosstubes - 1	5192214
MS35650-304	Nut	6 Ea (6 ea)	100-Crosstubes - 1	5155670
NAS1149D0363J	Washer	6 Ea (6 ea)	100-Crosstubes - 1	5176545
D5411-1	Rubber Bushing	2 pcs (2 ea)	154-Handfinish - 4-2-Assembly-B4B	FB151241
D5412-041	Crosstube Clamp Assembly	2 pcs (2 ea)	154-Handfinish - 4-2-Assembly-B4B	5167683
D5413-1	Crosstube Support	2 pcs (2 ea)	154-Handfinish - 4-2-Assembly-B4B	5163846
D5414-1	Support Bolt	4 pcs (4 ea)	154-Handfinish - 4-2-Assembly-B4B	5035407

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Crosstubes - 1	D135-1027-251	1	2	0
	D5511-1	3	17	0
	MS35650-304	6	20	0
	NAS1149D0363J	6	796	0
	D5411-1	2	30	0
154-Handfinish - 4-2-Assembly-B4B	D5412-041	2	16	0
	D5413-1	2	16	0
	D5414-1	4	38	0

Part Specifications

Specifications could not be found.

Plex 2/11/19 1:01 PM dart.white.jesse

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

Change Record

PAGE 1 OF 1

Part Number: D135-1027-241

Description: STD HEIGHT AFT CROSSTUBE ASSEMBLY

[illegible]